

## **LISTING OF CLAIMS:**

Claims 1 and 2 (Cancelled)

Claim 3 (Currently Amended): A surface-modified, pyrogenically produced oxides doped by aerosol, characterized in that the oxides are selected from the group consisting of  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{TiO}_2$ ,  $\text{B}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{In}_2\text{O}_3$ ,  $\text{ZnO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{Nb}_2\text{O}_5$ ,  $\text{V}_2\text{O}_5$ ,  $\text{WO}_3$ ,  $\text{SnO}_2$  and  $\text{GeO}_2$ , wherein the surface is modified to impart to the surface a sufficient hydrophobic character which permits rapid dissolution in organic systems at high concentrations with one or several compounds selected from the following groups:

a) Organosilanes having either formula  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$  or  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n-1})$ , wherein

R = alkyl, and

n = 1 – 20;

b) Organosilanes having either formula  $\text{R}'_x (\text{RO})_y \text{Si}(\text{C}_n\text{H}_{2n+1})$  or  $(\text{RO})_3\text{Si}(\text{C}_n\text{H}_{2n+1})$ ,

wherein

R = alkyl,

R' = alkyl,

R' = cycloalkyl

n = 1 – 20,

x+y = 3,

x = 1, or 2, and

$y = 1$ , or  $2$ ;

c) Halogen organosilanes having either formula  $X_3 Si(C_nH_{2n+1})$  or  $X_3 Si(C_nH_{2n-1})$ ,

wherein

$X = Cl$ , or  $Br$ , and

$n = 1 - 20$ ;

d) Halogen organosilanes having either formula  $X_2 (R') Si(C_nH_{2n+1})$  or

$X_2 (R') Si(C_nH_{2n-1})$  , wherein

$X = Cl$ , or  $Br$

$R' = \text{alkyl}$  ~~and~~ or cycloalkyl, and

$n = 1 - 20$ ;

e) Halogen organosilanes having formula  $X (R')_2 Si(C_nH_{2n+1})$  or

$X (R')_2 Si(C_nH_{2n-1})$  , wherein

$X = Cl$ , or  $Br$ ;

$R' = \text{alkyl}$  or ~~and~~ cycloalkyl, and

$n = 1 - 20$ ;

f) Organosilanes having the formula  $(RO)_3Si(CH_2)_m-R'$

$R = \text{alkyl}$ ,

$m = 0$ , or  $1-20$ , and

$R' = \text{methyl-}, \text{aryl-}, -C_6H_5, \text{ substituted phenyl groups},$   
 $-C_4F_9, OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$   
 $-NH_2, =N_3, -SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$   
 $-N-(CH_2-CH_2-CH_2NH_2)_2,$   
 $-OOC(CH_3)C=CH_2,$   
 $-OCH_2-CH(O)CH_2,$   
 $-NH-CO-N-CO-(CH_2)_5,$   
 $-NH-COO-CH_3, -NH-COO-CH_2-CH_3, -NH-(CH_2)_3Si(OR)_3,$   
 $-SH, \text{ or}$   
 $-NR'R''R''', \text{ wherein } R' = \text{alkyl, or aryl; } R'' = H, \text{ alkyl, aryl; and } R''' = H, \text{ alkyl, aryl,}$   
 $\text{benzyl, or } C_2H_4N(R'''' )_2, \text{ wherein } R'''' = H, \text{ or alkyl;}$

g) Organosilanes having the formula  $(R'')_x (RO)_y Si(CH_2)_m-R'$ , wherein

$R'' = \text{alkyl, or cycloalkyl},$

$x+y = 2,$

$x = 1, \text{ or } 2,$

$y = 1, \text{ or } 2,$

$m = 0, \text{ or } 1 \text{ to } 20, \text{ and}$

$R' = \text{methyl-}, \text{aryl-}, -C_6H_5, \text{ substituted phenyl groups},$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-N-(CH_2-CH_2-NH_2)_2,$

-OOC (CH<sub>3</sub>)C = CH<sub>2</sub>,

-OCH<sub>2</sub>-CH(O) CH<sub>2</sub>,

-NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,

-NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>,

or -SH , or

-NR'R''R''', wherein R' = alkyl, or aryl; R'' = H,

alkyl, or aryl; and R''' = H, alkyl, aryl, benzyl, or

C<sub>2</sub>H<sub>4</sub>N(R'''' )<sub>2</sub>, wherein R'''' = H, or alkyl ;

h) Halogen organosilanes having the formula X<sub>3</sub>Si (CH<sub>2</sub>)<sub>m</sub>-R', wherein

X = Cl, or Br,

m = 0, 1 – 20,

R' = methyl-, aryl, -C<sub>6</sub>H<sub>5</sub>, substituted phenyl groups

-C<sub>4</sub>F<sub>9</sub>, -OCF<sub>2</sub>-CHF-CF<sub>3</sub>, -C<sub>6</sub>F<sub>13</sub>, -O-CF<sub>2</sub>-CHF<sub>2</sub>,

-NH<sub>2</sub>, -N<sub>3</sub>, SCN, -CH=CH<sub>2</sub>, -NH-CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>,

-N-(CH<sub>2</sub>-CH<sub>2</sub>-NH<sub>2</sub>)<sub>2</sub>,

-OOC (CH<sub>3</sub>)C = CH<sub>2</sub>,

-OCH<sub>2</sub>-CH(O) CH<sub>2</sub>,

-NH-CO-N-CO-(CH<sub>2</sub>)<sub>5</sub>,

-NH-COO-CH<sub>3</sub>, -NH-COO-CH<sub>2</sub>-CH<sub>3</sub>, -NH-(CH<sub>2</sub>)<sub>3</sub>Si(OR)<sub>3</sub>, or

-SH;

i) Halogen organosilanes having the formula  $(R)X_2Si(CH_2)_m-R'$ , wherein

$X = Cl, \text{ or } Br,$

$R = \text{alkyl such as methyl-, ethyl-, or propyl-},$

$m = 0, \text{ or } 1 - 20, \text{ and}$

$R' = \text{methyl-, aryl-, } -C_6H_5, \text{ substituted phenyl groups},$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-N-(CH_2-CH_2-NH_2)_2,$

$-OOC(CH_3)C=CH_2,$

$-OCH_2-CH(O)CH_2,$

$-NH-CO-N-CO-(CH_2)_5,$

$-NH-COO-CH_3, -NH-COO-CH_2-CH_3,$

$-NH-(CH_2)_3Si(OR)_3, \text{ or}$

$-SH;$

(j) Halogen organosilanes having the formula  $(R)_2XSi(CH_2)_m-R'$ , wherein

$X = Cl, \text{ or } Br,$

$R = \text{alkyl},$

$m = 0, \text{ or } 1 - 20, \text{ and}$

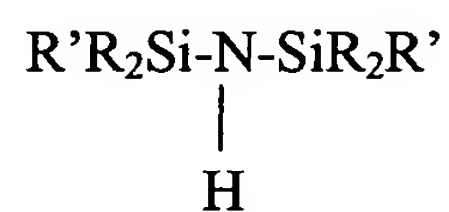
$R' = \text{methyl-, aryl-, } -C_6H_5, \text{ substituted phenyl groups},$

$-C_4F_9, -OCF_2-CHF-CF_3, -C_6F_{13}, -O-CF_2-CHF_2,$

$-NH_2, -N_3, SCN, -CH=CH_2, -NH-CH_2-CH_2-NH_2,$

$-\text{N}-(\text{CH}_2-\text{CH}_2-\text{NH}_2)_2,$   
 $-\text{OOC}(\text{CH}_3)\text{C}=\text{CH}_2,$   
 $-\text{OCH}_2-\text{CH}(\text{O})\text{CH}_2,$   
 $-\text{NH}-\text{CO}-\text{N}-\text{CO}-(\text{CH}_2)_5,$   
 $-\text{NH}-\text{COO}-\text{CH}_3, -\text{NH}-\text{COO}-\text{CH}_2-\text{CH}_3, -\text{NH}-(\text{CH}_2)_3\text{Si}(\text{OR})_3,$  or  
 $-\text{SH};$

(k) Silazanes having the formula

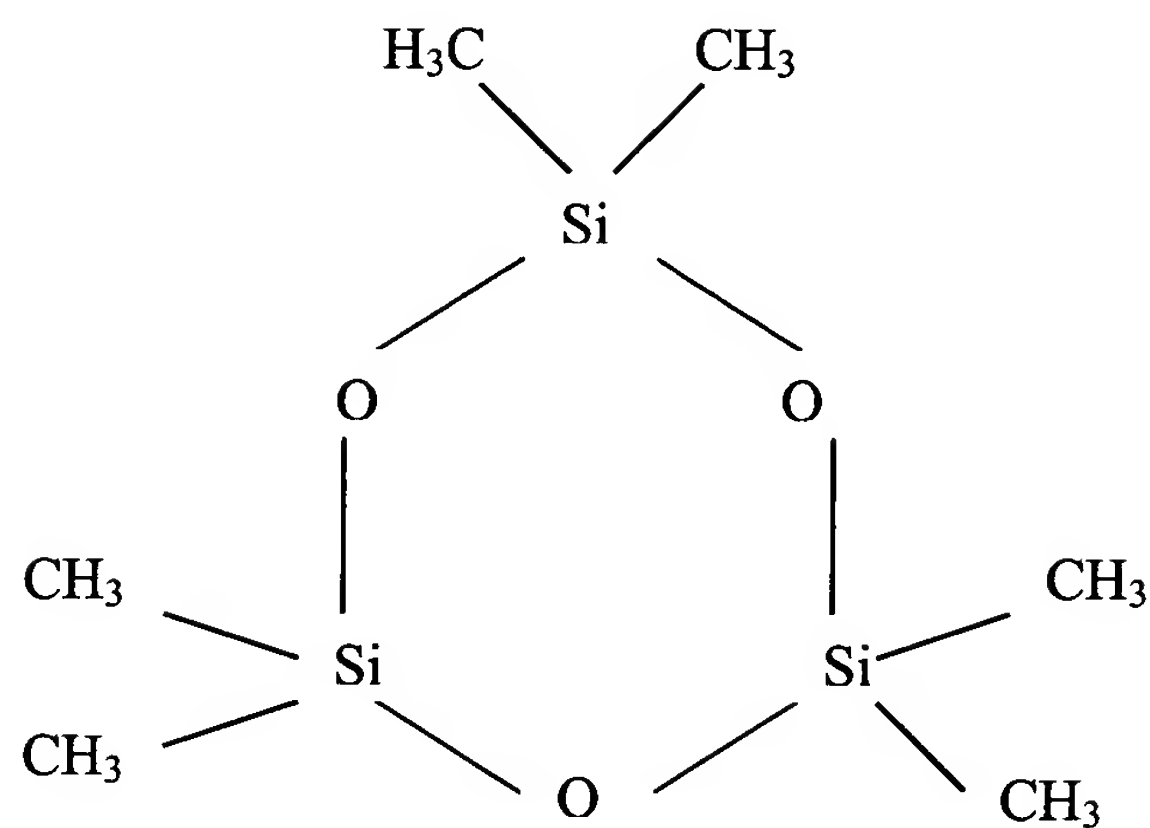


wherein R = alkyl, and

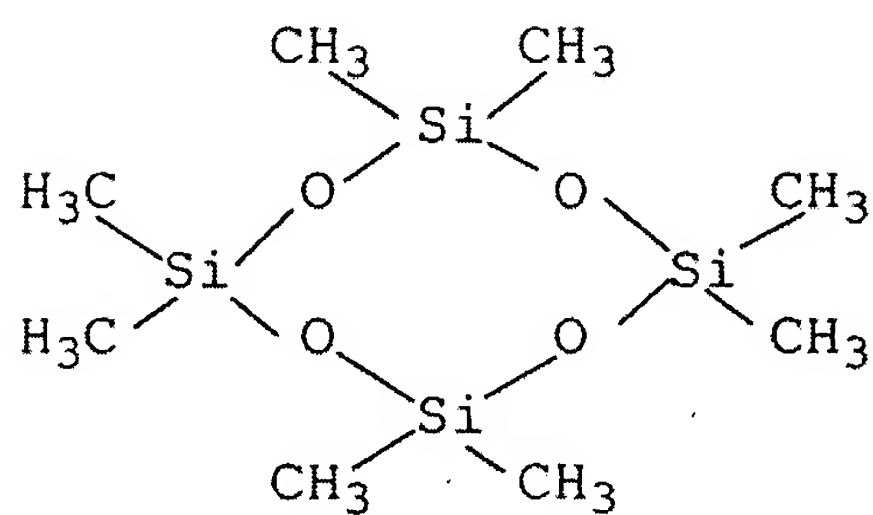
R' = alkyl, or vinyl; or

(l) Cyclic polysiloxanes D 3, D 4 or D 5,

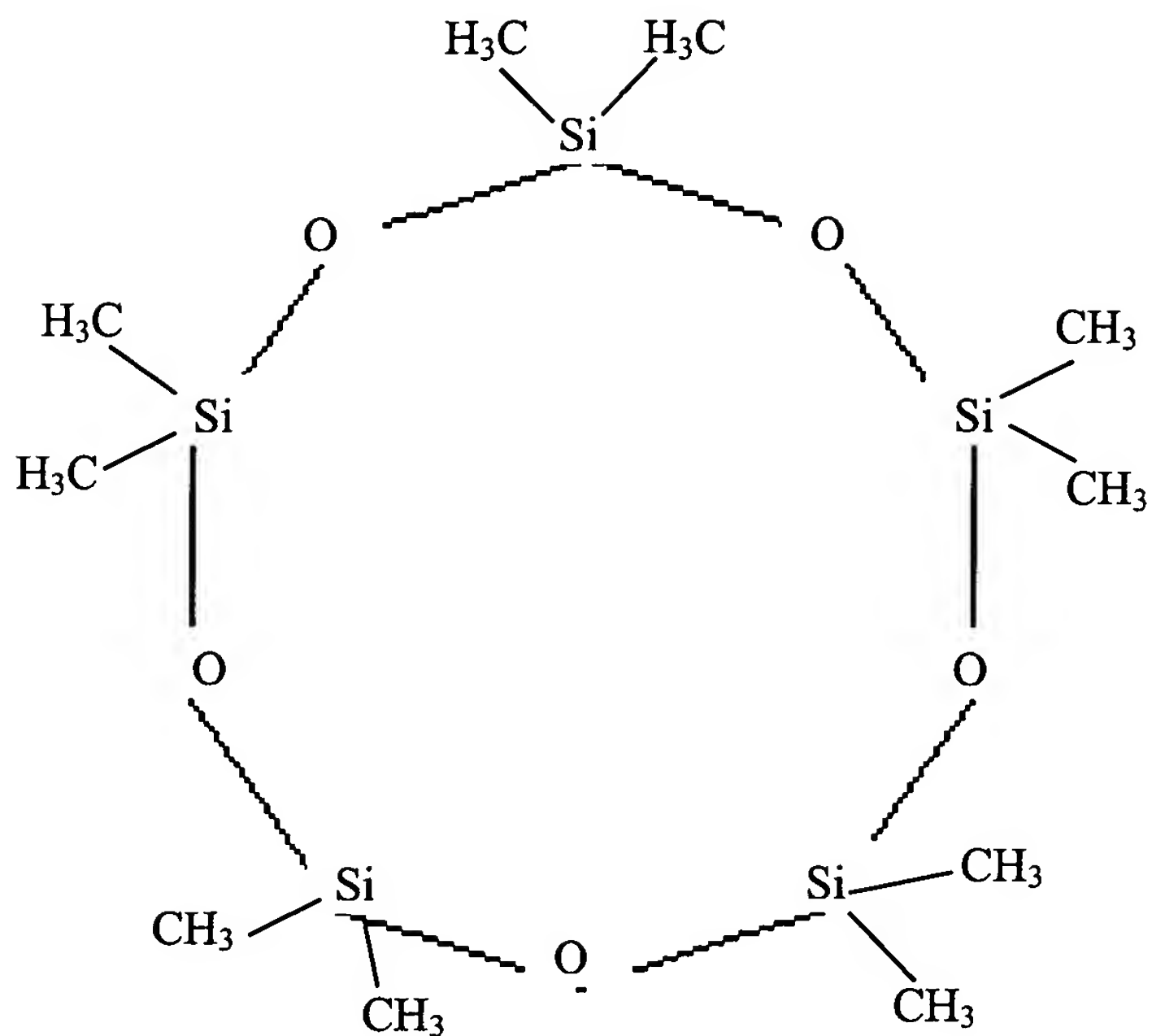
where 1) D3 has the formula:



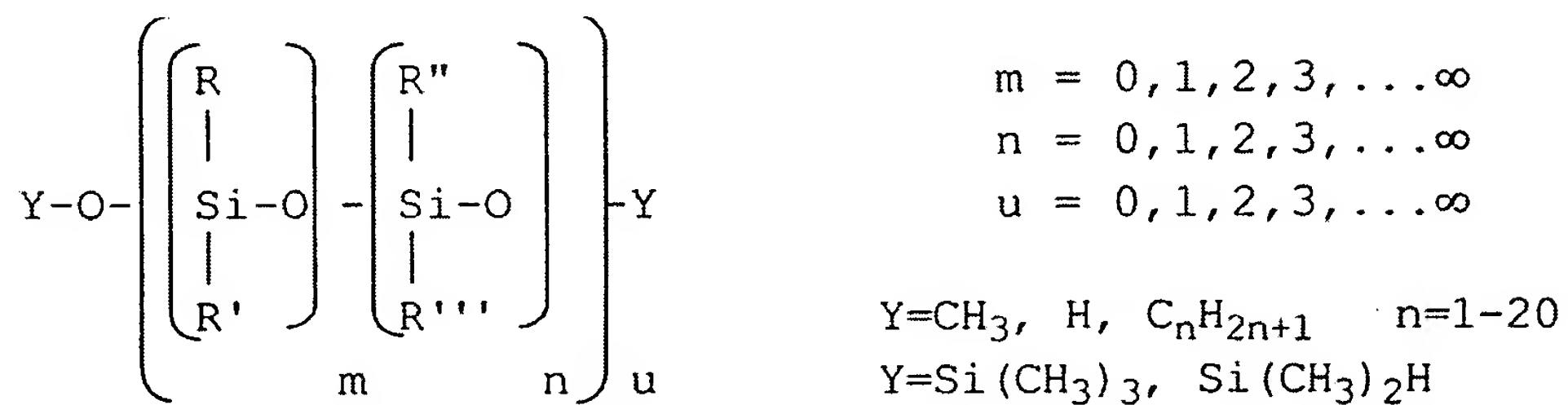
2) D4 has the formula:



and 3) D5 has the formula:



m) Polysiloxanes or silicone oils having any one of the formula



,  $Si(CH_3)_2OH$ ,  $Si(CH_3)_2(OCH_3)$ , or

$Si(CH_3)_2(C_nH_{2n+1})$ , wherein  $n=1-20$ ,

wherein,

$R = \text{alkyl, aryl, } (CH_2)_n-NH_2, \text{ or } H,$

$R' = \text{alkyl, aryl, } (CH_2)_n-NH_2, \text{ or } H,$



$R'' = \text{alkyl, aryl, } (CH_2)_n\text{-NH}_2, \text{ or H,}$

$R''' = \text{alkyl, aryl, } (CH_2)_n\text{-NH}_2, \text{ or H.}$

Claim 4 (Previously presented): A method of producing the surface-modified oxides in accordance with claim 3, comprising placing pyrogenically produced oxides doped by aerosol in a suitable mixing container, spraying the oxides under intensive mixing with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 5 (Previously presented): In a reinforcing filler composition wherein the improvement comprises the surface-modified oxides according to claim 3 as reinforcing filler.

Claim 6 (Original) The method of claim 4 wherein the spraying step includes spraying with water and/or acid prior to the spraying with the surface-modification reagent or a mixture of several surface-modification reagents.

Claim 7 (Original) The method of claim 4 further comprising re-mixing at 15 to 30 minutes and tempering at a temperature of 100 to 400 °C for a period of 1 to 6 hours.

Claim 8 (Previously presented) The surface-modified, pyrogenically produced oxides according to claim 3 wherein the cyclic polysiloxanes is D 4.

Claim 9 (Cancelled)